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EX PARTE OR LATE FILED

June 10, 1998

Magalie Roman Salas
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

JUN 10 1998

Re: **EX PARTE**

Amendment of Parts 1, 21 and 74 to Enable Multipoint Distribution Service
and Instructional Television Fixed Service Licensees to Engage in Fixed
Two-Way Transmissions -- MM Docket No. 97-217 and RM-9060

Dear Ms. Salas:

Today, David Moore, Executive Director of Communications of the Archdiocese of Los Angeles Education and Welfare Corporation, Edwin N. Lavergne, and J. Thomas Nolan of the law firm of Shook, Hardy & Bacon, L.L.P., Robert W. Denny, Jr. of the engineering consulting firm of Denny and Associates, P.C. and William D. Wallace of the law firm of Crowell and Moring, LLP met with Charles Dziedzic, Keith Larson, Joseph M. Johnson, David Roberts and Michael Jacobs of the Mass Media Bureau. We discussed issues raised by the Catholic Television Network ("CTN") in an ex parte filing made on June 8, 1998 and the merits of CTN's frequency separation proposal in the above-referenced proceeding as set forth more fully in the attachment to this letter.

Sincerely yours,



Edwin N. Lavergne
Counsel to the Archdiocese of
Los Angeles Education and Welfare

Attachment

cc: Charles Dziedzic
Keith Larson
Joseph M. Johnson
David Roberts
Michael Jacobs

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List A B C D E

Archdiocese of Los Angeles
Questions and Answers on
Frequency Separation ("Guard Band") Proposal
MM Docket No. 97-217
June 9, 1998

The Archdiocese of Los Angeles is a member of the Catholic Television Network (CTN), an association of 18 Roman Catholic Dioceses and Archdioceses. CTN has proposed that the Commission require a 6 MHz "guard band" to separate frequencies used for downstream ITFS transmissions (*i.e.*, traditional point-to-multipoint programming) from those used for upstream response station transmissions (*i.e.*, multipoint-to-point communications originated by subscribers or ITFS receive sites). This document responds to a number of questions that have arisen regarding CTN's proposal.

Q. Why does CTN believe a guard band is necessary?

A. CTN's guard band proposal is designed to preserve the assurance of interference-free ITFS operation that has traditionally been provided by pre-grant engineering review. CTN's engineers have demonstrated that there is a significant threat of interference to ITFS receive sites from the operation of a large number of response station transmitters at undisclosed locations. Because the locations of MDS response station transmitters are unknown, neither the Commission nor affected licensees can adequately evaluate in advance whether the deployment of these transmitters will cause interference. Since CTN's proposal guarantees that downstream ITFS programming will be separated by at least 6 MHz from upstream communications, response station transmitters will be incapable of causing co-channel or adjacent-channel interference to ITFS facilities.

Moreover, CTN's engineers have shown that the requirement to protect response station hub receivers will have a preclusive effect on ITFS licensees' ability to modify and expand their facilities after the deployment of a two-way system. The requirement to protect response station hubs is unlike any requirement in the present rules because these hubs may be omnidirectional, highly sensitive receivers. CTN's guard band proposal eliminates this preclusive effect by ensuring that ITFS programming is not transmitted on frequencies adjacent to those received by a response station hub.

Q. Isn't a guard band spectrally inefficient?

A. No. This misperception arises from ambiguity in the term "guard band." As proposed by CTN, the "guard band" is not unused spectrum. It is a 6 MHz band separating ITFS downstream communications from upstream response station transmissions. The guard band

has potential uses, including the transmission of commercial MDS downstream communications. Such communications could originate from primary transmitters, booster stations, or response station hubs, and could be transmitted on either MDS channels or leased ITFS channels.

Q. If CTN believes that interference will occur to ITFS licensees, why won't MDS licensees face the same problem?

A. The interference threat to an ITFS licensee arises from the deployment of response station transmitters with unknown characteristics at unknown locations. By contrast, a wireless cable operator knows the characteristics and locations of all response station transmitters it deploys. It has both the incentive and the ability to avoid causing interference to its own commercial downstream transmissions. It may be possible for the wireless cable operator to design a two-way system that will avoid adjacent-channel interference. The wireless cable operator who benefits from such a design should also bear the risk that its design will fail in practice. CTN's proposal merely places the risk of interference where it belongs, on the wireless cable operator, and not on adjacent-channel ITFS licensees.

Q. Won't a guard band be restrictive and inflexible?

A. No. Frequency separation is highly flexible and adaptable to different market configurations. For example, in any two-way market, some portion of the spectrum must be used for commercial downstream communications to MDS subscribers. Frequency separation can be assured simply by placing channels used for upstream communications adjacent to these commercial downstream channels, and not adjacent to channels used for ITFS downstream operations.

Q. Can ITFS licensees use their frequencies for two-way communications under CTN's proposal?

A. Yes. An ITFS licensee can "turn around" one or more of its licensed channels for upstream communications with the consent of the adjacent-channel licensee. The accompanying Figure 3 illustrates such a configuration. Because an ITFS licensee may only deploy response station transmitters co-located at its registered receive sites, the risk of interference is extremely low, as Petitioners contend. See Proposed Section 74.939(a) and Letter to Magalie Roman Salas from Paul J. Sinderbrand at 6 (Apr. 27, 1998). Since an ITFS licensee's response stations are deployed with known characteristics at known locations, the consent of an adjacent-channel licensee should be easy to obtain, and is a much different matter than consent to the blanket deployment of MDS response stations.

In addition, an ITFS licensee can take advantage of two-way communications through an agreement with a wireless cable operator who deploys a market-wide two-way system. For example, an ITFS licensee's excess capacity lease agreement could provide for carriage of the licensee's upstream communications on the wireless cable operator's upstream frequencies. Alternatively, the agreement could provide for partial compensation to the ITFS licensee in the form of free or discounted access to the wireless cable operator's two-way services.

Q. How would CTN's guard band proposal work in practice?

A. The accompanying figures illustrate three possible configurations.

Figure 1 illustrates a market in which a single wireless cable operator licenses or leases capacity on all channel groups (MDS 1 and 2/2A are not depicted), with no grandfathered E or F ITFS licensees. Assuming that each ITFS licensee reserves one of its licensed channels for educational programming to receive sites, CTN's proposal restricts the use of only three channels (B3, C2, and H3), and permits the wireless cable operator to accumulate the immense total of 136 MHz of upstream transmission capacity. In practice, much of this capacity would undoubtedly be used for MDS downstream transmissions to subscribers.

Figure 2 illustrates a market in which an MDS licensee of the E and F Groups wishes to deploy a two-way system on its own, without the cooperation of any of the ITFS licensees in the area. Two channels (E1 and F4) would be restricted to downstream communications, while the remaining 6 channels -- 75 percent of the spectrum -- would be available for upstream use. Ordinarily, the bandwidth required for downstream communications will be much greater than the bandwidth required for upstream communications, so this allocation clearly will satisfy market demand.

Figure 3, as described above, illustrates the deployment of a two-way system by an ITFS licensee using its own licensed frequencies with the consent of an adjacent-channel licensee.

Q. What about other proposals for preventing interference?

A. Frequency separation is superior to other proposals for resolving the interference that is predicted to arise from two-way deployment.

- Frequency separation is *more flexible* than restricting upstream communications to a specific area of the ITFS and MDS spectrum, such as MDS channels 1 and 2/2A, since it permits a band plan to be tailored to individual market circumstances.
- Frequency separation is *less expensive* than placing a strict emission mask requirement on upstream transmitters, since subscriber equipment need not contain elaborate filters.


- Frequency separation is *more conducive to outside investment* in the wireless cable industry than secondary status for response station transmitters, since it virtually eliminates the risk that subscriber equipment will be required to cease operating due to interference.

Q. What is wrong with Petitioners' proposal to cure any interference that may occur?

A. Any proposal to cure interference *after* it occurs is unworkable in practice. An ITFS licensee that experiences interference would be required to notify one or more licensees of upstream response station hubs in the area. These licensees would, in turn, have to identify which one or more of potentially hundreds of transmitters were causing the problem. However, until the problem transmitters can be identified and the problem rectified, the ITFS licensee would have to live with the interference. The interference resolution process could drag on indefinitely. This would make an ITFS licensee's right to exclusive use of the spectrum a farce, and would stand the principle of interference-free operation on its head.

	B3	DOWNSTEAM	H3
	A4	ITFS	G4
	B4	ITFS	MDS Downstream
	C1	ITFS	ITFS
	D1	ITFS	
	C2	MDS Downstream	

[illegible][illegible]

<u>Symbol</u>	<u>Description</u>
ITFS	Channel used to transmit ITFS programming to receive sites
MDS Downstream	Channel reserved for MDS communications to subscribers or hubs ("guard band")
	Channel may be used for upstream response station communications from subscribers